

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A system for despreading a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal samples, each signal sample having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of chips, the system comprising:

a switch for selecting one of the in-phase portion and the quadrature-phase portion;

a first multiplier coupled to the switch for multiplying the selected portion of one of the plurality of signal samples with one PN code chip of the plurality of PN code chips to obtain a first product, ~~where the selected portion of one of the plurality of signal samples is selected by an odd-even switch and is either an even portion or an odd portion of the selected portion of the second plurality of signal samples~~ where the selected portion of one of the plurality of signal samples is provided to an odd-even switch and is either an even portion of an odd portion of the selected portion of the plurality of signal samples;

a second multiplier coupled to the switch for multiplying the selected portion of a second of the plurality of signal samples with the one PN code chip to obtain a second product, wherein the second of the plurality of signal samples succeeds the one of the plurality of signal samples, ~~where the selected portion of the second of the plurality of signal samples is selected by the odd-even switch and is either an even portion or an odd portion of the selected portion of the second of the plurality of signal samples~~ where the selected portion of the second of the plurality of signal samples is provided to an odd-even switch and is either an even portion of an odd portion of the selected portion of the plurality of signal samples; and

first adder coupled to the first multiplier and the second multiplier for adding the first product with the second product to obtain a first sum.

2. (Canceled)

3. (Currently Amended) The system of claim 1, further comprising:

a third multiplier coupled to a second switch for multiplying the selected portion of a third signal sample with a second PN code chip, wherein the third signal sample succeeds the second signal samples and wherein the second PN code chip succeeds the one PN code chip and the selected portion of the third signal sample is selected with an second odd-even switch and is either even portion or a second odd portion of the third signal sample;

a fourth multiplier coupled to the second switch for multiplying the selected portion of a fourth signal sample with the second PN code chip to obtain a fourth product, wherein the selected portion of the fourth signal samples succeeds the third signal sample and ~~the selected portion of the fourth signal sample is selected with the second odd-even switch and is either an even portion or an odd portion of the fourth signal sample~~ the selected portion of the fourth signal sample is provided to the second odd-even switch and is either an even portion or an odd portion of the fourth signal sample;

a second adder coupled to the third multiplier and the fourth multiplier for adding the third product with the fourth product to obtain a second sum; and

a third adder coupled to the first adder and the second adder for adding the first sum with the second sum.

4. (Canceled)

5. (Canceled)

6. (Currently Amended). A method for despreding a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal samples, each signal sample having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of chips, the method comprising:

selecting one of the in-phase portion and the quadrature-phase portion;

~~multiplying~~ combining the selected portion of one of the plurality of signal samples with one of the plurality of PN code chips to obtain a first product, where the selected portion is either an odd selected portion or an even selected portion as selected by an odd-even switch;

~~multiplying~~ combining the selected portion of a second signal sample of the plurality of signal samples with the one of the plurality of PN stage code chips to obtain a second product, wherein the second of the plurality of signal samples succeeds the one of the plurality of signal samples, where the selected portion is either an odd selected portion or an even selected portion as selected by the odd-even switch; and

~~adding~~ grouping the first product with the second product to obtain a first sum.

7. (Canceled).

8. (Currently Amended). The method of claim 6, further comprising:

~~multiplying~~ combining the selected portion of a third signal sample of the plurality of signal samples ~~with a second form of plurality of PN code chips~~ with a second from the plurality of PN code chips to obtain a third product, wherein the third of the plurality of signal samples succeeds the second of the plurality of signal samples and wherein the second of the plurality of PN code chips succeeds the one of the plurality of PN code chips and the selected portion is either an odd selected portion or an even selected portion of the third signal sample as selected by a second odd-even switch;

~~multiplying~~ combining the selected portion of a fourth signal sample of the plurality of signal samples with the second of the plurality of PN code chips to obtain a fourth product, wherein the fourth of the plurality of signal samples succeeds the third of the plurality of signal samples and the selected portion is either an odd selected portion or an even selected portion of the fourth signal sample as selected by the second odd-even switch;

~~adding~~ grouping the third product with the fourth product to obtain a second sum; and

~~adding~~ grouping the first sum with the second sum.

9. (Canceled).

10. (Currently Amended). The method of claim 6, further comprising:

~~multiplying~~ combining the selected portion of a third signal sample of the plurality of signal samples with a ~~[[the]]~~ second of the plurality PN code chip of the plurality of PN code chips to obtain a third product, wherein the third of the plurality of signal samples succeeds the second of the plurality of signal samples;

~~multiplying~~ combining the selected portion of a fourth of the plurality of signal samples with a third PN code chip of the plurality of PN code chips ~~the second PN chip stage~~ to obtain a fourth product, wherein the fourth of the plurality of signal samples succeeds the third of the plurality of signal samples and wherein the third of the plurality of PN code chips succeeds the second of the plurality of PN code chips;

~~adding~~ grouping the third product with the fourth product to obtain a second sum; and
~~adding~~ grouping the first sum with the second sum.

11-15. (Canceled).

16. (Currently Amended). A computer readable medium having software for despreading a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal samples, each signal having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of chips, the computer readable medium comprising:

means for selecting one of the in-phase portion and the quadrature-phase portion;

means for selecting one of an even PN code stage and odd PN code stage from one plurality of PN code chips;

means for multiplying the selected portion of one of the plurality of signal samples with one of the selected even PN code stage state and odd PN code stage to obtain a first product; and

means for multiplying the selected portion of a second of the plurality of signal samples with the one of the plurality of PN code chips to obtain a second product, wherein the second of the plurality of signal samples succeeds the one of the plurality of signal samples; and

means for adding the first product with the second product to obtain a first sum.

17. (Canceled).

18. (Currently Amended). The computer readable medium of claim 16, further comprising:

means for multiplying the selected portion of a third of the plurality of signal samples with ~~a second of the plurality of PN code chips~~ a second PN code chip of the plurality of PN code chips to obtain a third product, wherein the third signal sample of the plurality of signal samples succeeds the second signal sample of the plurality of signal samples wherein the second PN code chip of the plurality of PN code chips succeeds the one of the plurality of PN code chips;

means for multiplying the selected portion of a fourth signal sample of the plurality of signal samples with second code chip of plurality of PN code chips to obtain a fourth product, wherein the fourth signal sample succeeds the third samples;

means for adding the third product with the fourth product to obtain a second sum; and

means for adding the first sum with the second sum.

19. (Canceled).

20. (Currently Amended). The computer readable medium of claim 16, further comprising:

means for multiplying the selected portion of a third signal sample of the plurality of signal samples with ~~a~~ the second PN code chip of the plurality of PN code chips to obtain a third product, wherein the third signal sample succeeds the second signal sample;

means for multiplying the selected portion of a fourth signal sample of the plurality of signal samples with a third PN code chip of the plurality of PN code chips to obtain a fourth product, wherein the fourth signal sample succeeds the third signal sample and the third PN code chip succeeds the second PN code chip;

means for adding the third product with the fourth product the third product with the fourth product to obtain a second sum; and

means for adding the first sum with the second sum.

21. (Previously presented). A system for despread a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal sample pairs, each pair comprising an even signal sample and an odd signal sample, each signal sample having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of chips, the system comprising:

a first switch for selecting one of the in-phase portion and the quadrature-phase portion;

a second switch coupled to the first switch for selecting one of the even sample and the odd sample; and

a first multiplier coupled to the second switch for multiplying the selected portion of the selected sample of one of the plurality of signal sample pairs with one of the plurality of PN code chips to obtain a first product.

22. (Original). The system of claim 21, further comprising:

a second multiplier coupled to the second switch for multiplying the selected portion of the selected sample of a second of the plurality of signal sample pairs with a second of the plurality of PN code chips to obtain a second product, wherein the second of the plurality of signal sample pairs succeeds the one of the plurality of signal sample pairs, and the second of the plurality of PN code chips succeeds the one of the plurality of PN code chips; and

an adder coupled to the first multiplier and the second multiplier for adding the first product with the second product to obtain a first sum.

23. (Canceled).

24. (Canceled).

25. (Currently Amended). A method for despreding a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal sample pairs, each pair comprising an even signal sample and an odd signal sample, each signal sample having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of chips, the method comprising:

selecting one of the in-phase portion and the quadrature-phase portion;

selecting one of the even sample and the odd sample; and

~~multiplying~~ combining the selected portion of the selected sample of one of the plurality of signal sample pairs with one of the plurality of PN code chips to obtain a first product.

26. (Currently Amended). The method of claim 25, further comprising:

~~multiplying~~ combining the selected portion of the selected sample of a second of the plurality of signal sample pairs with a second of the plurality of PN code chips to obtain a second product, wherein the second of the plurality of signal sample pairs succeeds the one of the plurality of signal sample pairs, and the second of the plurality of PN code chips succeeds the one of the plurality of PN code chips; and

~~adding~~ grouping the first product with the second product to obtain a first sum.

27-32. (Canceled).

33. (Previously presented). A computer readable medium having software for despreads a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal sample pairs, each pair comprising an even signal sample and an odd signal sample, each signal sample having an in-phase portion and a quadrature-portion, and wherein the PN code comprises a plurality of chips, the computer readable medium comprising:

means for selecting one of the in-phase portion and the quadrature-phase portion;

means for selecting one of the even sample and the odd sample; and

means for multiplying the selected portion of the selected sample of one of the plurality of signal sample pairs with one of the plurality of PN code chips to obtain a first product.

34. (Original). The computer readable medium of claim 33, further comprising:

means for multiplying the selected portion of the selected sample of a second of the plurality of signal sample pairs with a second of the plurality of PN code chips to obtain a second

product, wherein the second of the plurality of signal sample pairs succeeds the one of the plurality of signal sample pairs, and the second of the plurality of PN code chips succeeds the one of the plurality of PN code chips; and

means for adding the first product with the second product to obtain a first sum.

35-65. (Canceled).